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**RESPONSES TO COMMENTS ON THE OPERABLE UNIT 5 DRAFT REMEDIAL  
DESIGN WORK PLAN**

**06/27/96**

**DOE-1066-96  
DOE-FN        EPAS  
32  
RESPONSES**

**RESPONSES TO COMMENTS  
ON THE OPERABLE UNIT 5  
DRAFT REMEDIAL DESIGN WORK PLAN  
FOR APRIL 1996**

**FERNALD ENVIRONMENTAL MANAGEMENT PROJECT  
FERNALD, OHIO**

**JUNE 1996**

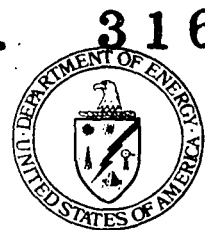
**U.S. DEPARTMENT OF ENERGY  
FERNALD AREA OFFICE**

**000001**



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JUN 27 1996

DOE-1066-96

Mr. James A. Saric, Remedial Project Director  
U.S. Environmental Protection Agency  
Region V - SRF-5J  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

Mr. Tom Schneider, Project Manager  
Ohio Environmental Protection Agency  
401 East 5th Street  
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

### TRANSMITTAL OF THE DRAFT FINAL REMEDIAL DESIGN WORK PLAN FOR REMEDIAL ACTIONS AT OPERABLE UNIT 5 AND RESPONSES TO COMMENTS

- References:
- 1) Letter from James Saric to Johnny W. Reising, "OU5 Draft Remedial Design Work Plan," dated May 23, 1996.
  - 2) Letter from Thomas A. Schneider to Johnny W. Reising, "Comments Remedial Design Work Plan OU5," dated May 1, 1996.

This letter transmits the subject documents for review and approval by your agencies. This Draft Final Remedial Design Work Plan incorporates revisions considered appropriate in response to the comments received from you via References 1 and 2.

Additions to and deletion from the Draft Remedial Work Plan are denoted by "redlines and strikeouts." Associated comment numbers are identified in the page margins, unless the change was initiated by the Department of Energy (DOE); these changes are marked in the margins as "DOE". An index is provided in the responses to comments that shows where each change to the Remedial Design Work Plan occurs as a result of the comment.

If you have any questions regarding this Remedial Design Work Plan, please contact Robert Janke at (513) 648-3124.

Sincerely,



Johnny W. Reising  
Fernald Remedial Action  
Project Manager

FN:R.J. Janke

Enclosure: As Stated

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**COMMENT CROSS REFERENCE LIST  
APRIL 1996 OUS RDWP**

DOE No.	Commenting Organization	Commentor	Original Comment No.	Section	Page No.	Line No.	New Page No.
1	U.S. EPA	Saric	G-1	1.3	NA		1-4, 1-5,
2	U.S. EPA	Saric	S-1	1.4	1-6	24-25	1-7, 2-2
3	U.S. EPA	Saric	G-2	2	NA	NA	2-15, 2-18, 2-20, 2-22, 2-25
4	U.S. EPA	Saric	G-3	2	NA	NA	2-4, 4-10
5	U.S. EPA	Saric	S-2	2.1.1	2-2	32	2-4, 2-15, 2-18, 2-20, 2-22, 2-25
6	U.S. EPA	Saric	S-3	Fig 2-1	2-3	NA	2-4, 4-10
7	U.S. EPA	Saric	S-4	2.1.2	2-4	14-15	4-7
8	U.S. EPA	Saric	G-4	2.1.4	NA	NA	2-7
9	U.S. EPA	Saric	S-6	2.1.4	2-6	21-30	2-7
10	U.S. EPA	Saric	G-5	2.2	NA	NA	2-14, 2-15, 2-18, 2-20, 2-22, 2-24, 2-25
11	U.S. EPA	Saric	S-5	Fig 2-2	2-5	NA	2-5
12	U.S. EPA	Saric	S-7	2.1.9	2-12	19-22	2-13, 5-6
13	U.S. EPA	Saric	S-8	2.2	2-13	30-35	2-15, 2-18, 2-20, 2-22, 2-25
14	U.S. EPA	Saric	S-9	3.1	3-1 & 3-2	3-33	3-1, 3-2
15	U.S. EPA	Saric	S-10	3.2	3-3	1-7	3-5, 3-9
16	U.S. EPA	Saric	G-6	3.3	NA	NA	3-9
17	U.S. EPA	Saric	S-11	3.3.1	3-5	12	3-9
18	U.S. EPA	Saric	S-12	3.3.2	3-5	28	3-5, 3-9
19	U.S. EPA	Saric	S-13	3.3.3	3-6	3	N/A
20	U.S. EPA	Saric	S-14	3.3.3	3-6	15	3-9
21	U.S. EPA	Saric	S-15	3.3.4	3-6	23	3-6, 3-7
22	U.S. EPA	Saric	S-16	3.3.9	3-8	12	3-9, 3-10
23	U.S. EPA	Saric	S-17	3.3.11	3-9	16	3-9
24	U.S. EPA	Saric	S-18	3.4.2	3-10	15	3-11
25	U.S. EPA	Saric	S-19	3.4.3	3-10	21	3-9, 3-12
26	U.S. EPA	Saric	S-20	3.4.4	3-11	1 & 2	3-9, 3-13
27	U.S. EPA	Saric	S-21	Table 3-1	3-12	NA	3-8, 3-9
28	U.S. EPA	Saric	G-7	4	NA	NA	3-8, 4-7, 4-8
29	U.S. EPA	Saric	G-8	4	NA	NA	4-8
30	U.S. EPA	Saric	S-22	4.1	4-1	NA	4-1
31	U.S. EPA	Saric	S-23	4.2.2	4-7	20-21	4-7
32	U.S. EPA	Saric	S-24	4.2.2	4-8	NA	4-7
33	U.S. EPA	Saric	G-9	5	NA	NA	5-1
34	U.S. EPA	Saric	S-25	5.1	5-1	NA	5-1

DOE No.	Commenting Organization	Commentor	Original Comment No.	Section	Page No.	Line No.	New Page No.
35	OEPA	OFFO	1	2.1.6	2-9	21-25	N/A
36	OEPA	OFFO	2	3.3.1	3-5	12	3-5, 3-9
37	OEPA	OFFO	3	Table 3-1	3-12		3-5, 3-9
38	OEPA	OFFO	4	4.2.1	4-4	28	4-4
39	OEPA	OFFO	5	4.2.3	4-8	11	4-7, 4-8
40	OEPA	OFFO	6	4.2.3	4-9	35	4-6

**RESPONSES TO U.S. EPA COMMENTS  
ON THE DRAFT OPERABLE UNIT 5 REMEDIAL DESIGN WORK PLAN  
(APRIL 1996)**

1. Commenting Organization: U.S. EPA      Commentor: Saric  
Section#: 1.3      Pg.#: NA      Line#: NA      Code: G  
Original General Comment# 1

Comment: Section 1.3 discusses the integration of the Operable Unit 5 (OU5) remedial design (RD) with related projects for other OUs; however, Section 1.3 does not clearly discuss the roles of the site-wide excavation plan (SEP), due in October 1996, the integrated remedial design packages (IRDp), and the integrated environmental management plan (IEMP) in the site-wide integrated approach to the RD/remedial action (RA) process. The text should be revised to clarify this matter.

Response: The text in section 1.3 will be expanded to more clearly discuss the roles of the Soil Excavation Plan (SEP), Integrated Remedial Design Packages (IRDp), and the Integrated Environmental Monitoring Plan (IEMP).

Action: To more clearly discuss the role of the SEP, IRDPs, and the IEMP - On page 1-4, delete line 24-29 "This plan will...Perimeter Air Monitoring).", and replace with the following:

The role of this plan is to address site-wide environmental monitoring and reporting requirements for air, biota, surface water/sediment, treated effluent, and groundwater including groundwater monitoring associated with the on-site disposal facility. The IEMP will also serve to define, where appropriate, any programmatic boundaries between the site-wide environmental monitoring activities envisioned for the IEMP and the project specific monitoring activities to be conducted by the FEMP's individual remedial projects under their respective project-specific RD/RA documentation. The detailed description of the role of the IEMP and associated integration objectives will be provided in the IEMP itself.

Site-wide planning for soil excavation will be addressed in the Site-wide Excavation Plan (SEP). The SEP will provide the management strategy necessary to govern site-wide soil remediation. Information to be included in the SEP will consist of methods and protocols that will be used during each phase of soil remediation. (The elements to be incorporated into the SEP are described in Section 4.2.2.) Individual area-specific integrated remedial design packages (IRDps) will be developed for each remediation area and submitted in phases that correlate with the planned sequence of soil remediation. Phasing of these remedial design deliverables will accomplish two goals: 1) expedite remediation to accommodate the FEMP's accelerated remediation plan, and 2) incorporate lessons learned into the support plans to the SEP. The details concerning the scope, sequence, and schedule for each of these deliverables is provided in Section 4.2.3.

2. Commenting Organization: U.S. EPA Commentor: Saric  
 Section#: 1.4 Pg.#: 1-6 Line#: 24-25 Code: S  
 Original Specific Comment# 1

Comment: The text states that the design scope has been segmented into two principal components: (1) soil remediation and (2) Great Miami Aquifer restoration. However, Section 9.1 of the ROD identifies 10 key components, some of which are presented as subtasks of the two components in the work plan. These subtasks are important and should be addressed individually. DOE should clearly identify in the work plan how the 10 key components of the ROD will be addressed. It may be appropriate to include a third principal component that encompasses the ROD components not currently addressed, such as site restoration and long-term maintenance.

Response: DOE agrees that the RD Work Plan should identify how the key components of the Operable Unit 5 remedy will be addressed by the remedial design. However, DOE feels that this discussion would better fit in Section 2.0 of the RD Work Plan, where the OU5 remedy is summarized. The discussion in Section 2.1 will be modified to specifically identify where in the RD Work Plan each of the key components of the OU5 remedy is addressed. The remedy component of cost was not carried forward into the RD Work Plan because it was not considered a key component to physically implement the selected remedy. Since the key components of the ROD are being addressed in this RD Work Plan it is not necessary to implement EPA's suggestion to add a third principal component. Site restoration and long-term maintenance, which are components mentioned by the reviewer, are within the remedy components of Measures to Minimize Environmental Impacts and Institutional Controls/Monitoring, respectively.

Action: Add the following sentence and table to Section 2.1: "Table 2-1 lists each of the key components of the OU5 remedy and provides a cross-reference identifying the specific section of the RD Work Plan that addresses each key component."

Add the following sentence to Section 1.4: "...and the development of the FEMP's Site Closeout Report", to emphasize that the successful remediation of Operable Unit 5 will define the end point of the FEMP's cleanup mission for the site.

3. Commenting Organization: U.S. EPA Commentor: Saric  
 Section#: 2 Pg.#: NA Line#: NA Code: G  
 Original General Comment# 2

Comment: Section 2.0 provides an abbreviated discussion of the OU5 selected remedy and references Section 9.0 of the OU5 Record of Decision (ROD) for further information. Because of the general nature of this discussion, the scope of work for the work plan is not clear. The work plan should be a stand-alone document that serves as a framework for implementing the requirements of the ROD. Section 2.0 of the work plan should be revised to include a more specific discussion of the OU5 selected remedy and to clearly define the scope of the RD.

Response: Agree in part. Section 2.0 is an abbreviated discussion of the OU5 remedy and is not intended to provide the scope of the RD Work Plan. The scope of work for the RD Work Plan is provided in Sections 3 and 4. These two sections were meant to specifically convey the scope of work and enforceable document delivery schedule for designing the Operable Unit 5 remedy.

Action: Section 2.0 will be expanded to include the FRL and waste acceptance criteria tables from the ROD as requested in Comments 5, 10, and 13. Section 2.0 will also be expanded as indicated in the response to Comment 2 to specify where in the RD Work Plan the key components of the ROD are addressed.



4. Commenting Organization: U.S. EPA Commentor: Saric  
 Section#: 2 Pg.#: NA Line#: NA Code: G  
 Original General Comment# 3

Comment: The U.S. Department of Energy (DOE) has proposed to excavate contaminated portions of the perched aquifer along with contaminated soils. A map of the possible soil excavation footprint is provided as part of the work plan. The U.S. Environmental Protection Agency (U.S. EPA) notes that portions of the contaminated soils and aquifer may not be excavated because of the presence of structures used for the ongoing site-wide cleanup. For example, the advanced wastewater treatment plant (AWWT), which is located within a contaminated zone, will be used to treat groundwater for up to 27 years (according to the OU5 ROD). Thus, the work plan should clearly state how contaminated perched water and soils will be addressed in areas where excavation is not feasible during the 10-year cleanup scenario.

Response: It is anticipated that soil contamination above the FRLs (and associated perched groundwater zones) will be remediated site-wide within the 10 year scenario, even if the AWWT facility, service roads, or other remediation facilities remain beyond the 10 years. Deliverables for addressing the possible remediation of soil beneath the AWWT or other areas with schedules potentially extending beyond the 10 year plan would be included in the applicable pre-final Integrated Remedial Design Package (IRDP). Certification sampling and remedial excavation around these areas will be performed to the extent feasible during the 10 year remediation scenario without compromising the structural integrity of any actively operating facility. Additional certification sampling will be completed when the structures are dismantled to confirm that FRLs are attained. Excavated soil and debris will be shipped off-site, if needed, and assuming that the on-site disposal facility is closed.

RI data do not indicate the presence of soil above FRLs or contaminated perched groundwater that represents a cross-media threat to the Great Miami Aquifer beneath the AWWT. The map referenced by the EPA is Figure 2-1 (page 2-3) showing the excavation footprint for the Operable Unit 5 selected remedy. The footprint on this map summarizes contaminants in soil above the FRLs and contaminants in perched groundwater that may pose a cross-media threat to the groundwater quality in the Great Miami Aquifer. The excavation footprint indicates the soil contamination above the FRLs to be 0 to 6 inches beneath the northern half of the AWWT facility. However, design drawings for the original AWWT construction site indicate that soil was excavated between 6 inches and 1-foot. Therefore, residual soil contamination exceeding the FRL beneath the AWWT is not expected.

Action: The first paragraph of the above response will be added to page 2-2 starting on line 25. In addition, the first sentence of the paragraph on page 4-10 of the Operable Unit 5 RD Work Plan, line 21, will be expanded to include the AWWT, as follows: "Areas 6 and 7 consist of the soil and debris remaining after removal of the Operable Unit 1 waste pits, the Operable Unit 5 AWWT, and Operable Unit 4 silos."

5. Commenting Organization: U.S. EPA Commentor: Saric  
 Section#: 2.1.1 Pg.#: 2-2 Line#: 32 Code: S  
 Original Specific Comment# 2

Comment: The text states that "contaminant specific waste acceptance criteria have been established." These criteria should be referenced in a specific document or included in an attachment.

Response: DOE will include the OU5 ROD established waste acceptance criteria and FRLs in the RD Work Plan.

Action: The sentence in lines 32 and 33, page 2-2 of Section 2.1.1, will be revised to read "Contaminant-specific waste acceptance criteria for the on-site disposal facility have been established in the OU5 ROD and are discussed in Section 2.2." The waste acceptance criterias established in the OU5 ROD will be included in the RD Work Plan, per the action for Comment No. 10.

6. Commenting Organization: U.S. EPA      Commentor: Saric  
 Section#: Fig. 2-1      Pg.#: 2-3      Line#: NA      Code: S  
 Original Specific Comment# 3  
 Comment: Figure 2-1 shows the excavation footprint as extending beneath the AWWT. This area also has perched water contamination. As the AWWT will be used to treat perched water and storm water for up to 27 years after excavation, it is unclear how excavation will be completed in this area. This issue should be resolved.  
 Response: Please see response to Comment No. 4.  
 Action: Please see action under Comment No. 4.
  
7. Commenting Organization: U.S. EPA      Commentor: Saric  
 Section#: 2.1.2      Pg.#: 2-4      Line#: 14-15      Code: S  
 Original Specific Comment# 4  
 Comment: The proposed method for excavation and perched water treatment is to excavate soils and then allow liquids to drain. This method may be difficult to implement in some areas because of the poor stability of saturated sands or silt. If dewatering technologies are to be used before excavation, they should be briefly discussed in the work plan. Such technologies may also be important to remediating contaminated perched water below the AWWT (see Original Specific Comment 3).  
 Response: It is agreed that the construction-control methods to be used for dewatering perched groundwater zones, and other excavation control issues should be identified within the scope of the SEP in Section 4.2.2 and will be described in detail in the IRDPs.  
 Action: An additional sentence will be added to bullet item, "Excavation Control", as follows, Protocol for perched groundwater dewatering methods, slope stability, soil management and staging requirements will be addressed."
  
8. Commenting Organization: U.S. EPA      Commentor: Saric  
 Section#: 2.1.4      Pg.#: NA      Line#: NA      Code: G  
 Original General Comment# 4  
 Comment: This section discusses the Fernald Environmental Management Project (FEMP) storm water collection system. The text states that FEMP will continue to operate this system until soil final remediation levels (FRL) are attained on a site-wide basis or until jointly deemed necessary by DOE and U.S. EPA. The final disposition of this system is not discussed in the text; therefore, it is unclear whether this system will be abandoned in place or whether system demolition followed by site restoration will be performed. The text should be revised to clarify this matter.  
 Response: Agree. The last sentence of the first paragraph in Section 2.1.4 will be clarified regarding management of the storm water collection system during remediation.  
 Action: The last sentence of the first paragraph in Section 2.1.4 will be replaced with the following sentence, "As remediation of the site (and the former production area) progresses, the storm water collection system will be decommissioned in stages to ensure continued storm water collection from the portions of the site that have not been remediated. Run-on and run-off controls will be addressed in the SEP, as described in Section 4.2.2."

9. Commenting Organization: U.S. EPA Commentor: Saric  
 Section#: 2.1.4 Pg.#: 2-6 Line#: 21-30 Code: S  
 Original Specific Comment# 6

Comment: The work plan discusses management of wastewater and storm water generated from cleanup operations. However, the work plan does not discuss management of run on or direct precipitation during excavation. Measures to prevent run on and contact with precipitation and contaminated areas should be discussed in the text.

Response: The discussion for run-on and run-off controls is provided in Section 4.0.

Action: Text will be added to Section 2.1.4, as follows:

"Storm water will be managed in open excavations, as practical, through the use of standard engineering techniques. Run-on and run-off controls will be addressed in the SEP, as described in Section 4.2.2."

10. Commenting Organization: U.S. EPA Commentor: Saric  
 Section#: 2.2 Pg.#: NA Line#: NA Code: G  
 Original General Comment# 5

Comment: This section provides an abbreviated discussion of the RA objectives and FRLs stated in the OU5 ROD. As noted in Original General Comment 2, the work plan should be a stand-alone document, and thus it should include the cleanup levels that the RD must meet. At a minimum, the FRLs should be provided in an attachment to the work plan. In addition, the waste acceptance criteria for the on-site disposal facility (OSDF) should be stated in the work plan or be included in an attachment.

Response: Agree. DOE will include the OU5 ROD established FRLs and waste acceptance criterias in the RD Work Plan.

Action: The FRLs will be provided in the Tables 2-2, 2-3, 2-4, and 2-5 of the OU5 RD Work Plan. These tables will be identical to Tables 9-3, 9-4, 9-5, and 9-6 in the OU5 ROD. Additionally, changes to the text in Section 2.2 will be made to reference the added tables, as follows:

1. The following sentences will be added after line 3 on page 2-13 in the draft OU5 RD Work Plan: "The environmental media subject to the final remediation levels are soil, Great Miami Aquifer groundwater, surface water in Paddy's Run and the Great Miami River, and sediment. The final remediation levels for each of these media are presented in Tables 2-2, 2-3, 2-4, and 2-5."
2. The phrase "presented in Section 9.0 of the ROD" on line 16 of page 2-13 will be deleted and replaced with "in Tables 2-2 through 2-5."
3. The sentence beginning with "Final remediation levels for groundwater . . ." on lines 30 through 32 on page 2-13 will be deleted.

The waste acceptance criteria for the on-site disposal facility will be provided in Table 2-6 of the OU5 RD Work Plan. This table is identical to Table 9-7 of the OU5 ROD. The text in Section 2.2 will be changed to reference Table 2-6. Specifically, the phrase "Table 9-7 of the ROD" will be deleted and replaced with "Table 2-6", in line 35, page 2-13.

11. Commenting Organization: U.S. EPA Commentor: Saric  
 Section#: Fig. 2-2 Pg.#: 2-5 Line#: NA Code: S  
 Original Specific Comment# 5

Comment: Figure 2-2 identifies an area of off-site groundwater contamination near Paddy's Run, but the text does not clearly state whether this area will be remediated. DOE should provide clarification on this issue.

**Response:** Agree. As shown on Figure 2-2, the administrative boundary for aquifer restoration to be addressed by this remedial design work plan is north of the Paddys Run Road Site Plume. DOE's role and involvement in OEPA's ongoing assessment and/or cleanup of the Paddys Run Road Site plume, if any, would be defined separately as part of the Paddys Run Road Site response obligations and in accordance with the Paddys Run Road Site project schedule. Monitoring will continue south of the administrative boundary until such time as the need for action is established and implemented.

**Action:** Insert the following text after the sentence ending on line 30, page 2-4, of the draft RD Work Plan: As noted on Figure 2-2, the administrative boundary for aquifer restoration to be addressed by this remedial design work plan is north of the Paddys Run Road Site Plume. DOE's role and involvement in OEPA's ongoing assessment and/or cleanup of the Paddys Run Road Site plume, if any, would be defined separately as part of the Paddys Run Road Site response obligations and in accordance with the Paddys Run Road Site project schedule. Monitoring will continue south of the administrative boundary as identified in the forthcoming IEMP, until such time as the need for action is established and implemented.

12. **Commenting Organization:** U.S. EPA      **Commentor:** Saric  
**Section#:** 2.1.9      **Pg.#:** 2-12      **Line#:** 19-22      **Code:** S  
**Original Specific Comment#** 7

**Comment:** This section discusses community involvement. The work plan states that the community involvement program will continue throughout remedial activities. However, DOE should state in the text whether this program will continue through the monitoring phase.

**Response:** Agree. The DOE intends to continue the extensive community involvement program, which goes beyond regulatory requirements, to ensure that local stakeholder concerns are addressed throughout the cleanup process. To this end, public involvement opportunities will be offered to the community during the post-remediation monitoring phase, as well as during the remediation phase.

**Action:** The text in the OU5 RD Work Plan will be changed as follows:

1. The phrase "and post-remediation monitoring" will be added between "remedial activities" and "at the site" in line 20, page 2-12, Section 2.1.9.
2. The last phrase on line 17, page 5-3, Section 5.2, will be revised to read " — throughout the remediation and post-remediation monitoring phases of site cleanup."

13. **Commenting Organization:** U.S. EPA      **Commentor:** Saric  
**Section#:** 2.2      **Pg.#:** 2-13      **Line#:** 30-35      **Code:** S  
**Original Specific Comment#** 8

**Comment:** The work plan cites remediation levels and waste acceptance criteria in the ROD. This information should be included in an attachment to the work plan.

**Response:** The remediation levels and waste acceptance criteria will be provided in tables within Section 2.0, as noted in the action for Comment No. 10.

**Action:** See action under Comment No. 10.

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14. Commenting Organization: U.S. EPA Commentor: Saric  
 Section#: 3.1 Pg.#: 3-1 & 3-2 Line#: 3-33 Code: S  
 Original Specific Comment# 9

Comment: The text states that "it was acknowledged that the remedial design activity would address EPA's desire to restore the off-property portion of the plume as the FEMP's highest groundwater priority, even though that portion of the plume is not necessarily the rate-limiting area controlling overall remediation time." The meaning of this statement is unclear. The work plan should clearly state whether the RD will address off-site contamination on a priority basis.

Response: Agree. Will modify sentence as requested, and will add an additional objective to Section 3.2 that clearly states the FEMP's intentions to restore the off property contamination in the aquifer on a priority basis.

Action: Delete last portion of sentence on line 2, Page 3-2 that reads: ...."even though that portion of the plume is not necessarily the rate-limiting area controlling overall remediation time."

Add a sixth objective after line 31, page 3-2 that reads:

"6. Restore the off-property portion of the Great Miami Aquifer groundwater plume as the FEMP's highest groundwater priority."

15. Commenting Organization: U.S. EPA Commentor: Saric  
 Section#: 3.2 Pg.#: 3-3 Line#: 1-7 Code: S  
 Original Specific Comment# 10

Comment: The work plan states that schedules for developing RD documents are uncertain because of uncertainty regarding the remediation system performance. As a result, only a partial list of deliverables and deliverable due dates is provided in Section 3.2. The work plan should identify as clearly as possible all deliverables and their likely delivery time frames. Critical path analysis should be used if necessary to identify the documents that are most important to the overall schedule. The results of this analysis should be incorporated into the schedule and the text.

Response: A similar comment was raised by OEPA in Comment No. 37. The remaining deliverables indicated in the main body of the text (the Baseline Remedial Strategy Report in Task 1; the O&M Plan in Task 2; the Integrated Environmental Monitoring Plan in Task 9; and the Site Closeout Report in Task 11) will be added to the remedial design deliverables schedule in Table 3-1 along with specific dates for submittal. Deliverables associated with the tests and studies discussed in Section 3.4 will also be added to Table 3-1.

It should be noted that the sequencing strategy and timing evaluations conducted within the scope of the Baseline Remedial Strategy Report (that will be formally submitted to EPA under Task 1) actually represent the essence of the critical path analyses suggested by the reviewer. The "life of remedy" schedule for submittal of the design packages and supporting documents provided in Table 3-1 and discussed in Section 3.5 considers the critical milestone dates that have been established through the preliminary modeling runs conducted for development of the Baseline Remedial Strategy Report. DOE's current funding baseline for groundwater restoration has also been developed based on these sequencing/scheduling evaluations and identification of the critical milestones for preparation of the design packages and startup dates for the various extraction and reinjection modules.

Action: Include the delivery dates for the O&M Plan, the Baseline Remedial Strategy Report, Integrated Environmental Monitoring Report, and the Site Closeout Report in the formal list of deliverables in Section 3-5 and Table 3-1.

16. Commenting Organization: U.S. EPA      Commentor: Saric  
 Section#: 3.3      Pg.#: NA      Line#: NA      Code: G  
 Original General Comment# 6  
 Comment: Several deliverables discussed in the text are not included in the proposed list of deliverables for groundwater (Table 3.1). The deliverables discussed in text are the (1) operations and maintenance (O&M) plan, (2) baseline remedial strategy report, (3) IEMP, (4) RA work plan for aquifer restoration, and (5) site close-out report. Table 3.1 should be revised to include a complete list of deliverables.  
 Response: Agree. See commitment provided under Comment No. 15.  
 Action: Revise Table 3-1 as discussed under Comment No. 15.
17. Commenting Organization: U.S. EPA      Commentor: Saric  
 Section#: 3.3.1      Pg.#: 3-5      Line#: 12      Code: S  
 Original Specific Comment# 11  
 Comment: The text mentions a report relating to groundwater modeling that will be submitted to U.S. EPA. The report should be clearly identified as a deliverable and its due date should be given in text and in Table 3-1.  
 Response: Agree. See commitment provided under Comment No. 15.  
 Action: Revise Table 3-1 as discussed under Comment No. 15.
18. Commenting Organization: U.S. EPA      Commentor: Saric  
 Section#: 3.3.2      Pg.#: 3-5      Line#: 28      Code: S  
 Original Specific Comment# 12  
 Comment: The text identifies the O&M plan for groundwater as a deliverable. This deliverable is not specified in Table 3-1. Also, it is unclear whether the O&M plan will address environmental monitoring issues other than those associated with groundwater. The O&M plan for groundwater and its due date should be included in Table 3-1, and the text should be clarified to state whether environmental monitoring issues other than groundwater will be addressed.  
 Response: Agree. Will add deliverable to Table 3-1 as discussed under Comment No. 15. Also note that all necessary environmental monitoring (including compliance-based discharge monitoring) will be conducted under the purview of the Integrated Environmental Monitoring Plan (IEMP) rather than the O&M plan. A clarifying sentence at line 30, page 3-5 has been added as the commentor requests.  
 Action: Revise Table 3-1 as discussed under Comment No. 15. Add following sentence at line 30, page 3-5: "The Operations and Maintenance Plan will be submitted according to the schedule provided in Section 3.5. The date shown in Section 3.5 for submittal of this document is six months ahead of the effective date of the FEMP's 20 ppb total uranium discharge limit to the Great Miami River. All environmental monitoring activities conducted in support of operations and maintenance decisions will be conducted and reported through the Integrated Environmental Monitoring Plan (developed under Task 9 of this work plan)."

19. Commenting Organization: U.S. EPA      Commentor: Saric  
 Section#: 3.3.3      Pg.#: 3-6      Line#: 3      Code: S  
 Original Specific Comment# 13  
 Comment: The text identifies nine existing wells in the south plume module. A different number of existing wells is shown in Figures 2-3 and 3-1. This discrepancy should be resolved.  
 Response: The nine wells referred to by the commentor on page 3-6 at line 3 are part of the South Field Extraction System Module (a new module presently under installation in the vicinity of the South Field), rather than the existing South Plume system that is located off property. The number of wells (nine) discussed on line 3 is correct for the South Field Extraction System module. Figures 2-3 is also correct (which delineates the 28-well FS "base case" system for reference purposes), as is Figure 3-1 (which delineates the geographic locations of the new modules envisioned for the future).  
 Action: None necessary, as the text and figures are correct.
20. Commenting Organization: U.S. EPA      Commentor: Saric  
 Section#: 3.3.3      Pg.#: 3-6      Line#: 15      Code: S  
 Original Specific Comment# 14  
 Comment: The text identifies a deliverable, the baseline remedial strategy report, that does not appear in Table 3-1. The deliverable and its projected due date should be included in Table 3-1.  
 Response: Agree. Table 3-1 will be revised to accommodate this request, as noted for Comment No. 15.  
 Action: Revise Table 3-1 to include the specific date for the Baseline Strategy Report deliverable.
21. Commenting Organization: U.S. EPA      Commentor: Saric  
 Section#: 3.3.4      Pg.#: 3-6      Line#: 23      Code: S  
 Original Specific Comment# 15  
 Comment: The text mentions a possible deliverable, the "first-phase, five well demonstration." If this is a deliverable, it should be included along with its projected due date in Table 3-1.  
 Response: Agree. The "first-phase, five well demonstration" mentioned in the comment is part of the two design deliverables accompanying the Injection Demonstration Module (the preliminary design package and the prefinal package), which are shown in Table 3-1.  
 Action: Revise sentence on line 22, page 3-6 to clarify "...the design of a first-phase five-well injection demonstration module that..."  
  
 Revise sentence on line 29, page 3-6 to clarify "...stand-alone design documents (developed under Task 4) will be submitted..."
22. Commenting Organization: U.S. EPA      Commentor: Saric  
 Section#: 3.3.9      Pg.#: 3-8      Line#: 12      Code: S  
 Original Specific Comment# 16  
 Comment: The text identifies the IEMP as a deliverable. This document should be included in Table 3-1 along with its projected due date. Also, the relationship of the IEMP to the O&M plan should be discussed in the text.  
 Response: Agree. Table 3-1 will be revised to accommodate this request, as noted for Comment No. 15.

Action: Revise Table 3-1 to include the specific date for the IEMP. Delete last sentence and last paragraph of Section 3.3.9 and replace with: "The IEMP will be submitted according to the schedule provided in Section 3.5." Add sentence on line 27, page 3-8 to read: "Environmental and routine discharge monitoring information developed as part of the IEMP will be used to support the remedy operating decisions conducted under the purview of the Operations and Maintenance Plan (Task 2) as necessary over the life of the Operable Unit 5 remedy."

23. Commenting Organization: U.S. EPA      Commentor: Saric  
 Section#: 3.3.11      Pg.#: 3-9      Line#: 16      Code: S  
 Original Specific Comment# 17  
 Comment: The text identifies the site closeout report as a deliverable. It may be difficult to project the due date of this deliverable, but it should be included in Table 3-1 along with a projected due date.  
 Response: Agree. Table 3-1 will be revised to accommodate this request, as noted for Comment No. 15.  
 Action: Revise Table 3-1 to include the projected date for the site closeout report as a formal RD deliverable.

24. Commenting Organization: U.S. EPA      Commentor: Saric  
 Section#: 3.4.2      Pg.#: 3-10      Line#: 15      Code: S  
 Original Specific Comment# 18  
 Comment: The text discusses the status of ongoing uranium desorption evaluation. The text should state whether a deliverable will be associated with this evaluation.  
 Response: These tests are done as a routine "good practice" measure whenever new drilling is conducted at the site for well installation in the Great Miami Aquifer. This practice has been done historically and will be continued in the future over the life of the remedy as the new modules are installed. The results are used to bolster and further refine the FEMP's understanding of site subsurface geochemical conditions; the results will be folded into the RD design process for the various future modules as necessary. Formal deliverables are not envisioned for these continuing measurements, other than to incorporate the results into the FEMP's data base that supports the sitewide groundwater model as appropriate.  
 Please note that descriptions of the tests and studies in Section 3.4 were included for information purposes, as all of these activities are being conducted under their own project specific plans (PSPs). (This was indicated in the opening paragraph to Section 3.4). The results of the studies, however, will be beneficial to the remedial design and that is why they were included for discussion in Section 3.4.  
 Action: The title of Section 3.4.2 will be modified for clarification to: "Uranium Desorption Measurements (Ongoing Over the Life of the Remedy)", to more fully acknowledge the FEMP's commitment to these continuing measurements.

25. Commenting Organization: U.S. EPA      Commentor: Saric  
 Section#: 3.4.3      Pg.#: 3-10      Line#: 21      Code: S  
 Original Specific Comment# 19  
 Comment: The text identifies ongoing testing related to the short-term injection test. The text should state when the results of this ongoing testing will be presented to U.S. EPA.  
 Response: Agree, although it should be noted this work is being conducted under its own project specific plan. (See response to Comment No. 24.)



Action: Add sentence on page 3-10, line 22 that reads: "As indicated in Section 3.5, a report summarizing this followup test is expected to be submitted to EPA in October 1996." This deliverable will also be noted in Table 3-1.

26. Commenting Organization: U.S. EPA Commentor: Saric

Section#: 3.4.4 Pg.#: 3-11 Line#: 1-2 Code: S

Original Specific Comment# 20

Comment: The text identifies a sampling program to address data gaps discovered during the feasibility study (FS). The sampling program should be described as a deliverable in text and included in Table 3-1 along with a projected due date.

Response: Agree. As mentioned in the response to Comment Nos. 24 and 25, the followup Great Miami Aquifer remediation area footprint verification will be conducted under a stand-alone project specific plan. The inclusion of the planned footprint verification sampling discussion in Section 3.4 was for information purposes, to let the reader know about an ancillary task that has a related bearing on the design activities that are covered under the umbrella of the RD Work Plan.

Action: The project specific plan for the remediation area footprint verification sampling will address the execution plan, summary report, and project schedule for this activity. The project specific plan will be submitted to EPA and OEPA for approval prior to conduct of the sampling. At present, the footprint verification sampling is expected to begin in FY 1997 and the project specific plan is envisioned to be furnished to EPA in the fall of 1996. Acknowledgement of this forthcoming plan was provided at line 9, page 3-11; a sentence will be added on line 11 to indicate: "As indicated in Section 3.5, the project specific plan is expected to be submitted to EPA and OEPA in October 1996." The future project specific plan and followup report will also be shown as deliverables in Table 3-1.

27. Commenting Organization: U.S. EPA Commentor: Saric

Section#: Table 3-1 Pg.#: 3-12 Line#: NA Code: S

Original Specific Comment# 21

Comment: Table 3-1 should be revised to include all possible deliverables. If specific due dates cannot be estimated, then due dates associated with project milestones should be provided. For instance, the FS data gap report will be submitted 90 days after the completion of FS data gap sampling activities (scheduled for summer 1996).

Response: As discussed in Comment No. 15, DOE agrees to revise Table 3-1 to address the specific delivery dates for all of the RD deliverables noted in Section 3.3 and 3.4. As discussed at the June 11, 1996 meeting with EPA and OEPA, both agencies indicated that they did not desire to review the detailed design package for the AWWT Expansion, provided that OEPA is furnished with necessary information to facilitate review of substantive PTI requirements. To reflect this understanding, DOE has removed the AWWT Expansion design package from the list of deliverables in Table 3-1, and has modified the text in Section 3.3.8 for the AWWT Facility Expansion Design to address preparation of a Permit Information Summary document to fulfill substantive permit requirements (such as the PTI) under the Amended Consent Agreement. The Permit Information Summary will be noted as a deliverable in Table 3-1.

000016

Action: Revise Table 3-1 to include all the groundwater RD deliverables encompassed by the RD work scope described in Section 3.3 and 3.4.

Add the following text to the end of Section 3.3.8: Similar to what has been provided for previous engineered enhancements to the AWWT facility (such as the slurry dewatering facility), DOE will provide EPA and OEPA with a Permit Information Summary to fulfill the substantive permit requirements of Section XIII of the Amended Consent Agreement. The Permit Information Summary will be provided to the EPA and OEPA for review 60 days prior to system construction, as shown in Table 3-1.

28. Commenting Organization: U.S. EPA      Commentor: Saric  
 Section#: 4      Pg.#: NA      Line#: NA      Code: G  
 Original General Comment# 7

Comment: A brief discussion of the soil certification process is presented in the text, and a reference to the SEP is made. Soil certification appears to be the focus of the SEP; however, certification of cleanup for other media, including perched water, sediment, and groundwater in the Great Miami Aquifer, must also be completed. The work plan should state how the certification process will be completed for each target medium, and reference should be made to the deliverables that will discuss these issues.

Response: This comment centers on the FEMP's certification processes to demonstrate that FRLs have been attained and cleanup objectives have been met. There are four environmental media at the FEMP (surface water, sediment, soil, and groundwater in the Great Miami Aquifer) that have FRLs established for them via the Operable Unit 5 ROD. Of the four environmental media that have established FRLs, only two -- groundwater in the Great Miami Aquifer, and soil -- actually require remediation to achieve the FRLs. The surface water and sediment found within Paddys Run and the Great Miami River do not require direct remediation, although both media will continue to be monitored during the FEMP's cleanup mission to ensure that other remediation activities do not cause deleterious impacts. As discussed in the responses to Comment Nos. 30 and 32, perched groundwater cleanup has been taken into account in the Operable Unit 5 soil remediation. The process of certification for cleanup will be presented in the following Operable Unit 5 RD deliverables:

Soil: (including perched groundwater zones)	Sitewide Excavation Plan and area-specific IRDPs
Sediment:	Integrated Environmental Monitoring Plan
Surface Water:	Integrated Environmental Monitoring Plan
Great Miami Aquifer:	Integrated Environmental Monitoring Plan

000017

The Integrated Environmental Monitoring Plan (discussed in Section 3.3.9 of this work plan) will delineate the FEMP's responsibilities for monitoring surface water and sediment over the life of the remedy, and to ensure that FRLs are achieved at project completion. The plan will also ultimately serve as the primary vehicle for determining to EPA and OEPA's satisfaction that restoration activities for the Great Miami Aquifer are complete. In addition to these FRL-based monitoring responsibilities, the Integrated Environmental Monitoring Plan will also define sitewide remedial monitoring requirements for biota and air. While these overall responsibilities were generally indicated for the plan in Section 3.3.9, additional text will be added to more clearly define the role of the Integrated Environmental Monitoring Plan in demonstrating attainment of the FEMP's FRLs.

The FEMP's soil certification process will be conveyed in the Sitewide Excavation Plan, identified in Section 4.2.2 of this work plan. The discussion under the bullet entitled Decision Criteria will be expanded to make this more clear. The specific methods and protocols for soil certification for a given remediation area are envisioned to be provided in each area-specific IRDP, based on the overall process conveyed in the Sitewide Excavation Plan. The deliverables comprising the Sitewide Excavation Plan and the IRDPs are identified in Table 4-1.

Action:

Also note that the actual FRLs for the four environmental media cited above (surface water, sediment, soil, and groundwater in the Great Miami Aquifer) have been added to the work plan in Section 2.0, as a result of the action for Comment No. 10. Modify opening paragraph under Section 3.3.9 by adding: "A sitewide integrated environmental monitoring plan (IEMP) will be developed that will specify the type and frequency of environmental monitoring activities to be conducted during remedy implementation and, ultimately, following the cessation of remedial operations as appropriate. The IEMP will delineate the FEMP's responsibilities for sitewide monitoring of surface water and sediment over the life of the remedy, and to ensure that FRLs are achieved at project completion. The plan will also serve as the primary vehicle for determining to EPA and OEPA's satisfaction that remedial action objectives for the Great Miami Aquifer have been attained. In addition to these FRL attainment responsibilities, the IEMP will also define sitewide remedial monitoring requirements for biota and air".

The sentence identified under the bullet titled Decision Criteria, Section 4.2.2 will be expanded to include the following, "...and certifying that final remediation levels for surface and subsurface soil (including soil found within affected perched groundwater zones) are attained during excavation. The soil final remediation levels provided in the Operable Unit 5 ROD (and included in Section 2.0 of this work plan) consider the potential for cross media impacts through the perched groundwater system and address the varying leachability of the uranium species found within and outside the FEMP's process area".

A new bullet will be added under the Implementation Plan for the IRDPs under Section 4.2.3 that reads: "Soil certification protocols, to determine that actions are complete"

29. Commenting Organization: U.S. EPA Commentor: Saric  
 Section#: 4 Pg.#: NA Line#: NA Code: G  
 Original General Comment# 8

Comment: The ROD calls for several studies that are not directly addressed in the work plan. These studies, termed "measures to minimize impacts," involve (1) impacts on on-property vegetation and wildlife, (2) woodland replacement and mitigation, (3) possible relocation of the Sloan's crayfish in Paddy's Run, (4) wetland mitigation, (5) archaeological and historical surveys, and (6) an institutional control plan. DOE may intend to discuss the results of these studies in one or more of the scheduled deliverables; however, plans for these studies as well as the associated deliverables should be clearly presented in the work plan.

Response: Agree. The information provided for natural resource studies related to "measures to minimize impacts" should be more clearly identified in Section 4.0 of the RD Work Plan and correlated to RD and RA deliverables. The natural resource issues identified in this comment can be separated under two categories: 1) measures necessary to protect natural resources during remediation, and 2) strategic development of a natural resource restoration plan. Natural resources requiring protection during remediation include:

- Identifying and protecting threatened and endangered species from impacts due to remediation. This includes possible relocation of the Sloan's crayfish, and
- Protocol for protecting unearthed cultural or archaeological finds during remediation.

The protocol needed to address measures to minimize impact to natural resources during remediation will be summarized in Section 4.2.2 of this work plan, and will be addressed in the SEP and area-specific IRDPs.

The other natural resource items identified in EPA's comment would be more appropriately addressed as site-wide restoration issues that will be covered in supporting documentation as part of the SEP. It may be advantageous to update this supporting documentation as restoration decisions are finalized to incorporate "lessons learned." Natural resource restoration decisions will incorporate future land use objectives, mitigation of natural resources, possible deed restrictions, and associated long-term institutional controls. The approach to be used is broadly described in the bullet item, "Baseline Grading" of Section 4.2.2.

Action: Add a bullet item to Section 4.2.2, as follows:

- Measures to Minimize Impacts - Identification of potential impacts to ensure protection of threatened and endangered species, and protocol for ensuring protection of archeological and cultural finds during remediation will be addressed."

30. Commenting Organization: U.S. EPA Commentor: Saric  
 Section#: 4.1 Pg.#: 4-1 Line#: NA Code: S  
 Original Specific Comment# 22

Comment: The text identifies several factors that will drive the sequence of soil excavation, including certification that soil meets cleanup objectives. The text should clarify whether the certification process will include verification that perched water has been remediated in a given area.

**Response:** As discussed in the response to comments for the Operable Unit 5 Record of Decision, the perched groundwater cleanup requirements have, by definition, been taken into account in the establishment of cross-media cleanup levels for the FEMP's subsurface soil. Development of the cross media cleanup levels can be reviewed in the Operable Unit 5 FS, Section 2.0. The success of perched groundwater remediation will be tracked by certifying that the Operable Unit 5 soil FRLs have been met throughout the affected subsurface area. The cleanup certification approach will be developed, and defined in the SEP to ensure that soil FRLs are achieved, and confirm that potential cross media impacts are eliminated. During development of each pertinent IRDP the volumetric excavation limits will be evaluated to ensure that they envelope the perched groundwater zones that were identified in the FS as posing a potential cross media threat to the Great Miami Aquifer.

**Action:** Revise second bullet, page 4-1 to read: "Remediating and certifying on a priority basis, where necessary, that surface and subsurface soil (including soil found within affected perched groundwater zones) attains final remediation levels specified in the Operable Unit 5 ROD to support the implementation schedules of other FEMP projects..."

31. **Commenting Organization:** U.S. EPA      **Commentor:** Saric  
**Section#:** 4.2.2      **Pg. #:** 4-7      **Line#:** 20-21      **Code:** S  
**Original Specific Comment#** 23

**Comment:** The bulleted item "Sampling and Analysis Methods and Requirements" should include other required sampling elements, such as sampling methods, representative sampling, and sampling rationale.

**Response:** Agree.

**Action:** The bullet item "Sampling and Analyses Methods and Requirements" will be modified to say, "Data quality objectives, analytical requirements, sampling methods, representative sampling, sampling rationale, and sampling frequency will be outlined."

32. **Commenting Organization:** U.S. EPA      **Commentor:** Saric  
**Section#:** 4.2.2      **Pg. #:** 4-8      **Line#:** NA      **Code:** S  
**Original Specific Comment#** 24

**Comment:** Another bulleted item should be added for perched water remediation and verification because perched water will be remediated as part of the excavation program.

**Response:** Please see the discussion under the response to Comment No. 30 regarding the use of the Operable Unit 5 soil cleanup levels (which explicitly take into account the potential for cross media impacts) to verify the success of perched groundwater cleanup. The first bullet on page 4-7 (entitled Decision Criteria) will be revised to identify this element.

**Action:** Revise first bullet, page 4-7 to read: "Decision Criteria - ...and certifying that final remediation levels for surface and subsurface soil (including soil found within affected perched groundwater zones) are attained during excavation. The soil final remediation levels provided in the Operable Unit 5 ROD (and included in Section 2.0 of this work plan) consider the potential for cross media impacts through the perched groundwater system and address the varying leachability of the uranium species found within and outside the FEMP's process area".

33. Commenting Organization: U.S. EPA Commentor: Saric  
 Section#: 5 Pg.#: NA Line#: NA Code: G  
 Original General Comment# 9

Comment: Section 5 of the work plan is overly general in its discussion of program management. The section does not provide specific information on (1) the roles, responsibilities, and lines of authority of project team members; (2) the interrelation of other programs with OU5 RD tasks; (3) the estimated timetable for tasks and deliverables; or (4) how the identified project organizations will meet specific task objectives and project schedules. This section should be modified to: (1) define the roles, responsibilities, and lines of authority of project team members; (2) define relationships with other, related programs; (3) identify time-critical tasks and their relationships to other project components; and (4) provide greater detail on the startup date, duration, and estimated completion date of each project task.

Response: It is agreed that more specific information should be provided on: 1) the roles responsibilities, and lines of authority of project team members; and 2) the interrelation of other programs with Operable Unit 5 RD tasks. However, the estimated timetable for deliverables is already identified in Tables 3-1 and 4-1. The timetables for tasks will be provided in individual RD deliverables. Completion of specific task objectives and project schedules for Operable Unit 5 projects is included in Sections 3.0 and 4.0.

Action: Section 5.1 will be revised to: 1) define the roles, responsibilities, and lines of authority of project team members; and 2) define relationships with other related programs.

34. Commenting Organization: U.S. EPA Commentor: Saric  
 Section#: 5.1 Pg.#: 5-1 Line#: NA Code: S  
 Original Specific Comment# 25

Comment: Five project organizations are introduced in text as the "fully integrated project organizations...established to focus on successfully [planning] and [executing] remedial activities for discrete segments of the total project scope." It is not clear at this point or elsewhere in this section how these project organizations will assume responsibility for the tasks required under the work plan. The organizations' responsibilities are structured according to other, ongoing programs. This may be appropriate, but a framework should be provided that clearly details the responsibilities of each organization in executing the RD tasks. Furthermore, the relationship of the current program organization to the RD tasks should be described in the work plan.

Response: Agree.

Action: Please see action for Comment No. 33.

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**RESPONSES TO OEPA COMMENTS  
ON THE DRAFT OPERABLE UNIT 5 REMEDIAL DESIGN WORK PLAN  
(APRIL 1996)**

35. Commenting Organization: OEPA      Commentor: OFFO  
Section#: 2.1.6      Pg.#: 2-9      Line#: 21-25      Code: C  
Original Comment# 1  
Comment: DOE needs to have a work plan in place for the potential upstream relocation of the threatened Sloan's crayfish in Paddys Run prior to the commencement of OU5 remedial activities. By having this plan in place prior to commencement of remedial activities, DOE will be able to ensure that the crayfish are safely relocated, without causing timely delays in cleanup action. Also, what monitoring methods will be employed to measure this potentially harmful sediment loading into Paddys Run?  
Response: DOE agrees that further discussion with OEPA regarding protection of Sloan's crayfish in the on-property portions of Paddys Run is necessary.  
Action: A contingency work plan to relocate on-property Sloan's crayfish is being prepared for the Area 1, Phase I, RA Work Plan, which will also address the Operable Unit 1 rail yard construction activities. Concurrence for this work plan approach will be established after further discussion with OEPA. This discussion is anticipated to occur in July 1996.
36. Commenting Organization: OEPA      Commentor: OFFO  
Section#: 3.3.1      Pg.#: 3-5      Line#: 12      Code: C  
Original Comment# 2  
Comment: Please refer to this document by the name "Baseline Remedial Strategy Report" as it is referred to for the first time on Page 3-6. Please provide a more exact date for submission of the BRSR in the draft final version of this Work Plan.  
Response: Agree.  
Action: Will revise line 11 to read: "Following the completion of the modeling simulations, the Baseline Remedial Strategy Report will recommend..."  
  
Will revise line 1 to read: "...the DOE will prepare a Baseline Remedial Strategy Report that will summarize the results of..."  
  
Table 3-1 will be revised to include the date for submission of the Baseline Remedial Strategy Report.
37. Commenting Organization: OEPA      Commentor: OFFO  
Section#:      Pg.#: 3-12      Line#: Table 3-1      Code: C  
Original Comment# 3  
Comment: Please upgrade Table 3-1 by including the following documents:  
  - O&M Plan for ARP referred to on page 3-5, Section 3.3.2
  - Baseline Remedial Strategy Report referred to on page 3-5, Section 3.3.1
  - Integrated Environmental Monitoring Plan referred to on page 3-8  
Response: Agree.  
Action: Table 3-1 has been revised to include the submittal dates for the three requested documents, and also the Site Closeout Report resulting from Task 11. (See response to Comment No. 15 for similar request made by U.S. EPA).

38. Commenting Organization: OEPA Commentor: OFFO  
 Section#: 4.2.1 Pg.#: 4-4 Line#: 28 Code: C  
 Original Comment# 4  
 Comment: It is unclear whether the four technology studies discussed here will be summarized in one report or whether each technology will be reported on individually. Please provide a schedule for submittal of the reports and a summary update of progress to date.  
 Response: Agree that clarification is appropriate.  
 Action: The first sentence of the last paragraph in Section 4.2.1, will be revised to confirm that four separate project reports were submitted to address the results of the technology studies, and will include a submittal date. The sentence will be changed, as indicated below:
- "Results of these studies are presented in four separate project reports, which were submitted to the EPA and OEPA on May 24, 1996 (see Table 4-1)."
39. Commenting Organization: OEPA Commentor: OFFO  
 Section#: 4.2.3 Pg.#: 4-8 Line#: 11 Code: C  
 Original Comment# 5  
 Comment: One type of area-specific information that is not explicitly stated is the screening of COCs and the determination of Area Specific COCs (ASCOCs). The Implementation Plan is one logical place to do this. If DOE concurs, please make the addition here.  
 Response: Agree.  
 Action: The first bullet item under "Decision Criteria" on page 4-7 of Section 4.0 will be expanded to identify the logic for COC screening, and strategy for determining area-specific COCs within the scope of the SEP. It will read as follows: "The overall logic for several remediation decisions will be provided for: identifying the extent of contamination, establishing site-wide COC screening criteria, determining area-specific COCs, and addressing the waste acceptance criteria for the on-site disposal facility. In addition, methods will be described for certifying..."
- A bullet item will also be added to the scope of the Implementation Plan as follows:  
 "Identification of ASCOCs."
40. Commenting Organization: OEPA Commentor: OFFO  
 Section#: 4.2.3 Pg.#: 4-9 Line#: 35 Code: C  
 Original Comment# 6  
 Comment: Please provide the date for the submittal of the Remedial Design Package for the South Field and the Active and Inactive Flyash Piles, don't just reference a document where the date can be found.  
 Response: Agree.  
 Action: Submittal dates will be provided for the South Field and the Active and Inactive Flyash Piles (Area 2, Phase I) Remedial Design Package, listed on Table 4-1. The submittal date for this design package was delayed from October 22, 1996 until August 11, 1997, based on a letter from EPA to DOE in June of 1996 regarding the Area 2, Phase I milestone. In addition, a decision was made during a meeting on June 11, 1996 with the agencies to delay the submittal date for Area 1, Phase I from April 30, 1996 until July 17, 1996 to allow a more realistic timeframe for final development of that document. During the same meeting it was agreed to move the submittal date of the SEP from October 22, 1996 to March 14, 1996 to incorporate lessons learned from implementation of the Area 1, Phase I Work Plan into the SEP.



TABLE 2-1

**REMEDY COMPONENT - REMEDIAL DESIGN WORK PLAN CROSS REFERENCE**

Remedy Component	RD Work Plan Section Reference
Soil and Sediment	4.2.2 and 4.2.3
Perched Water	4.2.2 and 4.2.3
Regional Groundwater Aquifer	3.0, 3.3, 3.3.1, 3.3.3-3.3.7, 3.3.9, 3.4, and 3.5
Stormwater/Wastewater	3.3.2, 4.2.2, 4.2.3
Treatment of Discharges	3.3.8
Measures to minimize environmental impacts	4.2.2
Institutional Controls/Monitoring	3.3.9, 4.0
The Corrective Action Management (CAMU) Rule	4.2.2
Community Involvement	2.1.9, 5.0

3,5,10,13

TABLE 2-2

## FINAL REMEDIATION LEVELS FOR SOIL

Constituent	On-Property Final Remediation Levels	Off-Property Final Remediation Levels
<b>Radionuclides (pCi/g)</b>		
Cesium-137+1d	$1.4 \times 10^0$	$8.2 \times 10^{-1}$
Neptunium-237+1d	$3.2 \times 10^0$	$4.9 \times 10^{-1}$
Lead-210+2d	$3.8 \times 10^1$	$2.2 \times 10^0$
Plutonium-238	$7.8 \times 10^1$	$9.3 \times 10^0$
Plutonium-239/240	$7.7 \times 10^1$	$9.0 \times 10^0$
Radium-226+8d	$1.7 \times 10^0$	$1.5 \times 10^0$
Radium-228+1d	$1.8 \times 10^0$	$1.4 \times 10^0$
Strontium-90+1d	$1.4 \times 10^1$	$6.1 \times 10^{-1}$
Technetium-99	$3.0 \times 10^1$	$1.0 \times 10^0$
Thorium-228+7d	$1.7 \times 10^0$	$1.5 \times 10^0$
Thorium-230	$2.8 \times 10^2$	$8.0 \times 10^1$
Thorium-232+10d	$1.5 \times 10^0$	$1.4 \times 10^0$
Uranium, total ( $K_1=325 \text{ L/kg}^a$ ) (ppm)	$8.2 \times 10^1$	$5.0 \times 10^1$
Uranium, total ( $K_1=15 \text{ L/kg}^a$ ) (ppm)	$2.0 \times 10^1$	NA
<b>Chemicals (mg/kg)</b>		
Acetone	$4.3 \times 10^4$	$4.3 \times 10^{-1}$
Antimony	$9.6 \times 10^1$	$6.1 \times 10^{-1}$
Aroclor-1254	$1.3 \times 10^{-1}$	$4.0 \times 10^{-2}$
Aroclor-1260	$1.3 \times 10^{-1}$	$4.0 \times 10^{-2}$
Arsenic	$1.2 \times 10^1$	$9.6 \times 10^0$
Barium	$6.8 \times 10^4$	$1.2 \times 10^2$
Benzene	$8.5 \times 10^2$	$4.3 \times 10^{-1}$
Benzo(a)anthracene	$2.0 \times 10^1$	$1.6 \times 10^{-1}$
Benzo(a)pyrene	$2.0 \times 10^0$	$9.0 \times 10^{-2}$
Benzo(b)fluoranthene	$2.0 \times 10^1$	$1.6 \times 10^{-1}$
Benzo(k)fluoranthene	$2.0 \times 10^2$	$9.0 \times 10^{-2}$
Beryllium	$1.5 \times 10^0$	$6.2 \times 10^{-1}$
Bis(2-chloroisopropyl)ether	$4.2 \times 10^2$	$2.0 \times 10^{-1}$
Bis(2-ethylhexyl)phthalate	$8.2 \times 10^2$	$2.6 \times 10^1$
Boron	$7.4 \times 10^3$	$4.0 \times 10^0$
Bromodichloromethane	$4.0 \times 10^0$	$1.8 \times 10^{-1}$
Bromoform	$3.1 \times 10^1$	$1.6 \times 10^0$
Bromomethane	$8.2 \times 10^3$	$2.4 \times 10^{-2}$
Cadmium	$8.2 \times 10^1$	$9.1 \times 10^{-1}$
Carbazole	$1.2 \times 10^1$	$3.1 \times 10^0$
Carbon disulfide	$5.0 \times 10^3$	$6.2 \times 10^0$
Carbon tetrachloride	$2.1 \times 10^0$	$9.1 \times 10^{-2}$

TABLE 2-2  
(Continued)

Constituent	On-Property Final Remediation Levels	Off-Property Final Remediation Levels
<b>Chemicals (Cont.) (mg/kg)</b>		
Chlordane	$1.9 \times 10^{-1}$	$3.8 \times 10^{-2}$
Chlorobenzene	$3.4 \times 10^2$	$1.9 \times 10^0$
Chloroform	$4.5 \times 10^1$	$5.0 \times 10^{-1}$
Chromium VI	$3.0 \times 10^2$	$1.1 \times 10^1$
Chrysene	$2.0 \times 10^3$	$1.6 \times 10^1$
Cobalt	$7.4 \times 10^2$	$2.6 \times 10^1$
Copper	$2.2 \times 10^5$	$2.0 \times 10^1$
Cyanide	$1.2 \times 10^5$	$8.0 \times 10^{-1}$
Dibenzo(a,h)anthracene	$2.0 \times 10^0$	$1.6 \times 10^{-3}$
3,3'-Dichlorobenzidine	$5.5 \times 10^{-1}$	$2.0 \times 10^{-1}$
1,2-Dichloroethane	$1.6 \times 10^{-1}$	$1.3 \times 10^{-1}$
1,1-Dichloroethene	$4.1 \times 10^{-1}$	$5.9 \times 10^{-2}$
Dieldrin	$1.5 \times 10^{-2}$	$8.8 \times 10^{-3}$
Di-n-octylphthalate	$1.1 \times 10^3$	$2.0 \times 10^{-1}$
Ethylbenzene	$5.1 \times 10^3$	$1.0 \times 10^{-3}$
Fluoride	$7.8 \times 10^4$	$8.5 \times 10^2$
Heptachlorodibenzofuran	$8.8 \times 10^{-4}$	$5.0 \times 10^{-5}$
Heptachlorodibenzo-p-dioxin	$8.8 \times 10^{-4}$	$5.0 \times 10^{-5}$
Indeno(1,2,3-cd)pyrene	$2.0 \times 10^1$	$1.6 \times 10^{-2}$
Lead	$4.0 \times 10^2$	$4.0 \times 10^2$
Manganese	$4.6 \times 10^3$	$1.4 \times 10^3$
Mercury	$7.5 \times 10^0$	$3.0 \times 10^{-1}$
Methyl-2-pentanone	$2.5 \times 10^3$	$9.4 \times 10^{-1}$
Methylene chloride	$3.7 \times 10^1$	$6.3 \times 10^{-1}$
4-Methylphenol	$2.5 \times 10^2$	$2.7 \times 10^{-1}$
Molybdenum	$2.9 \times 10^3$	$1.3 \times 10^1$ a
Nickel	$1.5 \times 10^4$	$3.4 \times 10^1$
4-Nitroaniline	$1.5 \times 10^2$	$8.0 \times 10^{-1}$
N-nitrosodiphenylamine	$5.1 \times 10^1$	$1.3 \times 10^1$
N-nitrosodipropylamine	$2.0 \times 10^{-1}$	$2.0 \times 10^{-1}$
Octachlorodibenzofuran	$8.8 \times 10^{-3}$	$1.0 \times 10^{-5}$
Octachlorodibenzo-p-dioxin	$8.8 \times 10^{-3}$	$1.0 \times 10^{-5}$
Pentachlorophenol	$2.3 \times 10^0$	$9.7 \times 10^{-1}$
Selenium	$5.4 \times 10^3$	$2.5 \times 10^0$
Silver	$2.9 \times 10^4$	$1.0 \times 10^0$
Tetrachloroethane	$3.6 \times 10^0$	$1.0 \times 10^0$
Thallium	$9.1 \times 10^1$	$1.0 \times 10^0$

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TABLE 2-2  
(Continued)

Constituent	On-Property Final Remediation Levels	Off-Property Final Remediation Levels
<b>Chemicals (Cont.) (mg/kg)</b>		
Toluene	$1.0 \times 10^5$	$2.7 \times 10^1$
Tributyl phosphate	$2.5 \times 10^2$	$2.9 \times 10^0$
1,1,2-Trichloroethane	$4.3 \times 10^0$	$1.9 \times 10^{-1}$
Trichloroethane	$2.5 \times 10^1$	$1.5 \times 10^0$
Vanadium	$5.1 \times 10^3$	$5.8 \times 10^1$
Vinyl chloride	$1.3 \times 10^{-1}$	$2.3 \times 10^{-3}$
Xylenes, total	$9.2 \times 10^5$	$4.0 \times 10^2$
Zinc	$1.2 \times 10^5$	$8.2 \times 10^1$

<sup>a</sup>  $K_1$  = leaching coefficient

3,5,10,13

TABLE 2-3

## FINAL REMEDIATION LEVELS FOR GREAT MIAMI AQUIFER GROUNDWATER

Constituent	Final Remediation Levels
<b>Radionuclides (pCi/L)</b>	
Neptunium-237(+1d)	$1.0 \times 10^0$
Radium-226(+8d)	$2.0 \times 10^1$
Radium-228(+1d)	$2.0 \times 10^1$
Strontium-90(+1d)	$8.0 \times 10^0$
Technetium-99	$9.4 \times 10^1$
Thorium-228(+7d)	$4.0 \times 10^0$
Thorium-230	$1.5 \times 10^1$
Thorium-232+(10d)	$1.2 \times 10^0$
Uranium, total (mg/L)	$2.0 \times 10^{-2}$
<b>Chemicals (mg/L)</b>	
Alpha-chlordane	$2.0 \times 10^{-3}$
Antimony	$6.0 \times 10^{-3}$
Aroclor-1254	$2.0 \times 10^{-4}$
Arsenic	$5.0 \times 10^{-2}$
Barium	$2.0 \times 10^0$
Benzene	$5.0 \times 10^{-3}$
Beryllium	$4.0 \times 10^{-3}$
Bis(2-chloroisopropyl)ether	$5.0 \times 10^{-3}$
Bis(2-ethylhexyl)phthalate	$6.0 \times 10^{-3}$
Boron	$3.3 \times 10^{-1}$
Bromodichloromethane	$1.0 \times 10^{-1}$
Bromomethane	$2.1 \times 10^{-3}$
Cadmium	$1.4 \times 10^{-2}$
Carbazole	$1.1 \times 10^{-2}$
Carbon disulfide	$5.5 \times 10^{-3}$
Chloromethane	$1.0 \times 10^{-3}$
Chloroform	$1.0 \times 10^{-1}$
Chromium VI	$2.2 \times 10^{-2}$
Cobalt	$1.7 \times 10^{-1}$

TABLE 2-3  
(Continued)

Constituent	Final Remediation Levels
<b>Chemicals (Cont.) (mg/L)</b>	
Copper	$1.3 \times 10^0$
1,1-Dichloroethane	$2.8 \times 10^{-1}$
1,1-Dichloroethene	$7.0 \times 10^{-3}$
1,2-Dichloroethane	$5.0 \times 10^{-3}$
Fluoride	$8.9 \times 10^{-1}$
Lead	$2.0 \times 10^{-3}$
Manganese	$9.0 \times 10^{-1}$
Mercury	$2.0 \times 10^{-3}$
Methylene chloride	$5.0 \times 10^{-3}$
4-Methylphenol	$2.9 \times 10^{-2}$
Molybdenum	$1.0 \times 10^{-1}$
Nickel	$1.0 \times 10^{-1}$
Nitrate	$1.1 \times 10^1$
4-Nitrophenol	$3.2 \times 10^{-1}$
Octachlorodibenzo-p-dioxin	$1.0 \times 10^{-7}$
Selenium	$5.0 \times 10^{-2}$
Silver	$5.0 \times 10^{-2}$
2,3,7,8-Tetrachlorodibenzo-p-dioxin	$1.0 \times 10^{-5}$
Trichloroethane	$5.0 \times 10^{-3}$
Vanadium	$3.8 \times 10^{-2}$
Vinyl chloride	$2.0 \times 10^{-3}$
Zinc	$2.1 \times 10^{-2}$

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TABLE 2-4

**FINAL REMEDIATION LEVELS FOR SURFACE WATER IN PADDYS RUN AND THE  
GREAT MIAMI RIVER \***

Constituent	Final Remediation Levels
<b>Radionuclides (pCi/L)</b>	
Cesium-137+1d	$1.0 \times 10^1$
Neptunium-237+1d	$2.1 \times 10^2$
Lead-210+2d	$1.1 \times 10^1$
Plutonium-238	$2.1 \times 10^2$
Plutonium-239/240	$2.0 \times 10^2$
Radium-226+8d	$3.8 \times 10^1$
Radium-228+1d	$4.7 \times 10^1$
Strontium-90+1d	$4.1 \times 10^1$
Technetium-99	$1.5 \times 10^2$
Thorium-228+7d	$8.3 \times 10^2$
Thorium-230	$3.5 \times 10^3$
Thorium-232+10d	$2.7 \times 10^2$
Uranium, total (mg/L)	$5.3 \times 10^{-1}$
<b>Chemicals (mg/L)</b>	
Alpha-chlordane	$3.1 \times 10^{-4}$
Antimony	$1.9 \times 10^{-1}$
Aroclor-1254	$2.0 \times 10^{-4}$
Aroclor-1260	$2.0 \times 10^{-4}$
Arsenic	$4.9 \times 10^{-2}$
Barium	$1.0 \times 10^2$
Benzene	$2.8 \times 10^{-1}$
Benzo(a)anthracene	$1.0 \times 10^{-3}$
Benzo(a)pyrene	$1.0 \times 10^{-3}$
Beryllium	$1.2 \times 10^{-3}$
Bis(2-chloroisopropyl)ether	$2.8 \times 10^{-1}$
Bis(2-ethylhexyl)phthalate	$8.4 \times 10^{-3}$
Bromodichloromethane	$2.4 \times 10^{-1}$
Bromomethane	$1.3 \times 10^0$
Cadmium	$9.8 \times 10^{-3}$
Chloroform	$7.9 \times 10^{-2}$

TABLE 2-4  
(Continued)

Constituent	Final Remediation Levels
<b>Chemicals (Cont.) (mg/L)</b>	
Chromium VI	$1.0 \times 10^{-2}$
Copper	$1.2 \times 10^{-2}$
Cyanide	$1.2 \times 10^{-2}$
Dibenzo(a,h)anthracene	$1.0 \times 10^{-3}$
3,3-Dichlorobenzidene	$7.7 \times 10^{-3}$
Di-n-butylphthalate	$6.0 \times 10^0$
1,1-Dichloroethene	$1.5 \times 10^{-2}$
Dieldrin	$2.0 \times 10^{-5}$
Di-n-octylphthalate	$5.0 \times 10^{-3}$
Fluoride	$2.0 \times 10^0$
Lead	$1.0 \times 10^{-2}$
Manganese	$1.5 \times 10^0$
Mercury	$2.0 \times 10^{-4}$
Methylene chloride	$4.3 \times 10^{-1}$
4-Methylphenol	$2.2 \times 10^0$
Molybdenum	$1.5 \times 10^0$
Nickel	$1.7 \times 10^{-1}$
Nitrate	$2.4 \times 10^3$
4-Nitrophenol	$7.4 \times 10^3$
Selenium	$5.0 \times 10^{-3}$
Silver	$5.0 \times 10^{-3}$
Tetrachloroethane	$4.5 \times 10^{-2}$
1,1,1-Trichloroethane	$1.0 \times 10^{-3}$
1,1,2-Trichloroethane	$2.3 \times 10^{-1}$
Vanadium	$3.1 \times 10^0$
Zinc	$1.1 \times 10^{-1}$

\* The point of compliance is outside the mixing zone.



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TABLE 2-5

## FINAL REMEDIATION LEVELS FOR SEDIMENT

Constituent	Final Remediation Levels
<b>Radionuclides (pCi/g)</b>	
Cesium-137(+1d)	$7.0 \times 10^0$
Neptunium-237(+1d)	$3.2 \times 10^1$
Lead-210(+2d)	$3.9 \times 10^2$
Plutonium-238	$1.2 \times 10^3$
Plutonium-239/240	$1.1 \times 10^3$
Radium-226(+8d)	$2.9 \times 10^0$
Radium-228(+1d)	$4.8 \times 10^0$
Strontium-90(+1d)	$7.1 \times 10^3$
Technetium-99	$2.0 \times 10^5$
Thorium-228(+7d)	$3.2 \times 10^0$
Thorium-230	$1.8 \times 10^4$
Thorium-232(+10d)	$1.6 \times 10^0$
Uranium, total (mg/kg)	$2.1 \times 10^2$
<b>Chemicals (mg/kg)</b>	
Aroclor-1254	$6.7 \times 10^{-1}$
Aroclor-1260	$6.7 \times 10^{-1}$
Arsenic	$9.4 \times 10^1$
Benzo(a)anthracene	$1.9 \times 10^2$
Benzo(a)pyrene	$1.9 \times 10^1$
Benzo(b)fluoranthene	$1.9 \times 10^2$
Benzo(k)fluoranthene	$1.9 \times 10^3$
Beryllium	$3.3 \times 10^1$
Bis(2-ethylhexyl)phthalate	$5.0 \times 10^3$
Bromoform	$1.6 \times 10^2$
Cadmium	$7.1 \times 10^1$
Carbazole	$6.3 \times 10^1$
Chromium VI	$3.0 \times 10^3$
Chrysene	$1.9 \times 10^4$
Cobalt	$3.6 \times 10^4$
Indeno(1,1,2-cd)-pyrene	$1.9 \times 10^2$

**TABLE 2-5**  
**(Continued)**

Constituent	Final Remediation Levels
<b>Chemicals (Cont.) (mg/kg)</b>	
Manganese	$4.1 \times 10^2$
4-Methyl-2-pentanone	$2.1 \times 10^3$
N-Nitrosodiphenylamine	$2.6 \times 10^2$
Phenanthrene	$3.0 \times 10^{-3}$
Thallium	$8.8 \times 10^1$

3,5,10,13

TABLE 2-6

**OPERABLE UNIT 5 ON-PROPERTY DISPOSAL FACILITY  
WASTE ACCEPTANCE CRITERIA**

Constituent of Concern	Maximum Concentration
<b>Radionuclides: (pCi/g)</b>	
Neptunium-237	$3.12 \times 10^9$
Strontium-90	$5.67 \times 10^{10}$
Technetium-99	$2.91 \times 10^1$
Total uranium - (mg/kg)	$1.03 \times 10^3$
<b>Organics (mg/kg):</b>	
1,2-Dichloroethane	*
Carbazole	$7.27 \times 10^4$
Bis(2-chlorisopropyl)ether	$2.44 \times 10^{-2}$
Alpha-chlordane	$2.89 \times 10^0$
Bromodichloromethane	$9.03 \times 10^{-1}$
4-Nitroaniline	$4.42 \times 10^{-2}$
Chloromethane <sup>a</sup>	$3.92 \times 10^5$
1,1,1-Trichloroethane <sup>a</sup>	*
1,1-Dichloroethane <sup>a</sup>	*
Carbon tetrachloride <sup>a</sup>	*
Chloroform <sup>a</sup>	*
Methylene chloride <sup>a</sup>	*
Chloromethane <sup>a</sup>	*
Vinyl chloride <sup>a</sup>	$1.51 \times 10^0$
Tetrachloroethane <sup>a</sup>	$1.28 \times 10^2$
Trichloroethane <sup>a</sup>	$1.28 \times 10^2$
1,1-Dichloroethene <sup>a</sup>	$1.14 \times 10^1$
1,2-Dichloroethene <sup>a</sup>	$1.14 \times 10^1$
Acetone <sup>a</sup>	*
Benzene <sup>a</sup>	*
Endrin <sup>a</sup>	*
Ethylbenzene <sup>a</sup>	*
Heptachlor <sup>a</sup>	*

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TABLE 2-6  
(Continued)

Constituent of Concern	Maximum Concentration
<b>Organics (Cont.) (mg/kg):</b>	
Heptachlor epoxide <sup>a</sup>	*
Hexachlorobutadiene <sup>a</sup>	*
Methoxychlor <sup>a</sup>	*
Methyl ethyl ketone <sup>a</sup>	*
Methyl isobutyl ketone <sup>a</sup>	*
Toluene <sup>a</sup>	*
Toxaphene <sup>a</sup>	1.06 x 10 <sup>5</sup>
Xylenes <sup>a</sup>	*
<b>Inorganics (mg/kg):</b>	
Boron	1.04 x 10 <sup>3</sup>
Mercury <sup>a</sup>	5.66 x 10 <sup>4</sup>
Chromium VI <sup>a</sup>	*
Barium <sup>a</sup>	*
Lead <sup>a</sup>	*
Silver <sup>a</sup>	*

<sup>a</sup> RCRA-based constituent of concern

\* Denotes compounds that will not exceed designated Great Miami Aquifer action level within 1000-year performance period, regardless of starting concentration in the disposal facility.

15,16,17,18,20,22,  
23,25,26,27,36,37

TABLE 3-1

## SCHEDULE OF REMEDIAL DESIGN DELIVERABLES FOR GROUNDWATER

Module-Specific Design Packages		
Restoration Module	Preliminary Package	Pre-Final Package
South Field Extraction System (Task 3)	Complete	Complete
Advanced Wastewater Treatment Facility Expansion (Task 8)	Included as part of FS Report	July 30, 1996
Injection Demonstration (Task 4)	August 1, 1996	December 1, 1996
South Plume Optimization (Task 5)	August 1, 1996	December 1, 1996
Waste Storage Area Extraction (Task 7)	June 15, 2001	November 30, 2001
Plant 6 Area Extraction (Task 6)	August 15, 2001	November 30, 2001
Remedial Action Work Plans and Technical Reports		
Deliverable	Submittal Date	
Baseline Remedial Strategy Report (Task 1)	August 1, 1996	
Integrated Environmental Monitoring Plan (IEMP) (Task 9)	August 1, 1996	
Operation and Maintenance Plan (Task 2)	July 1, 1997	
Remedial Action Work Plan for the Aquifer Restoration Project (Task 10) <sup>a</sup>	November 1, 1996	
Site Closeout Report (Task 11)	90 days following project completion	
Miscellaneous Tests and Studies in Support of Remedial Design		
Deliverable	Submittal Date	
Short-Term Injection Test Report	October 1, 1996	
Project Specific Plan: Restoration Area Verification Sampling	October 1, 1996	
Summary Report: Restoration Area Verification Sampling	90 days following compilation of 4th quarter data	
Permit Information Summary for the Advanced Wastewater Treatment Facility Expansion	60 days prior to system construction	

<sup>a</sup>Addenda to the Remedial Action Work Plan will be furnished with each prefinal design package to convey module-specific enforceable RA construction schedules.

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TABLE 4-1

## SCHEDULE OF REMEDIAL DESIGN DELIVERABLES FOR SOIL

Deliverable	Status	Submittal Date
Technology Report	Draft	May 24, 1996
Site-wide Excavation Plan	Draft	March 14, 1997
Integrated Remedial Design Packages:		
Area 1, Phase I	Prefinal	July 17, 1996
Area 1, Phase II	Prefinal	June 26, 1997
Area 2, Phase I*	Prefinal	March 14, 1997
Area 3	Prefinal	July 2, 1998
Area 4 and Area 5	Prefinal	November 15, 2000
Area 6; Area 7; Area 1, Phase III; and Area 2, Phase II	Prefinal	January 15, 2001

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\* Area 2, Phase I consists of the Operable Unit 2 Waste Units.